

U.S. Patent Application Serial No. 09/673,194
Amendment dated November 14, 2003
Reply to OA of August 14, 2003

REMARKS

Claims 1-3 and 9 are pending in this application. An amendment to claim 1 is proposed herein.

In the proposed amendment, claim 1 is clarified to recite that the thermoplastic resin containing the carboxylic group is cross-linked “while maintaining the state of dispersion.” Support for this amendment may be found in the disclosure of the specification at page 16, line 22 to page 17, line 4, wherein it is disclosed that the thermoplastic resin cures (i.e., is cross-linked) “with maintaining function as a dispersant without adsorption and aggregation of the pigment particles with each other in water-based system.” That is, the state of dispersion of the pigment particles is maintained. Moreover, the specification states on page 16, lines 10-12, state that the “pH of the dispersion at finishing cross-linking reaction is adjusted ...”, that is, this is still a dispersion after cross-linking. (See also page 15, lines 7-15 in this regard).

Claims 1, 3 and 9 are rejected under 35 U.S.C. §102(a) as being anticipated by JP 09255867.

Reconsideration and withdrawal of the rejection are respectfully requested in view of the proposed amendment to claim 1. Applicants have previously argued that in none of the cited references is the resin cross-linked while maintaining a state of dispersion. In response, in the final Office action the Examiner stated that the claims recited only that the cross-linking occurs “after the pigment is dispersed with the thermoplastic resin” and did not recite “while maintaining a state of dispersion.” For clarity, Applicants here amend claim 1 to explicitly recite “while maintaining the state of dispersion.” Support for this in the specification is discussed above.

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Applicants note that the wording “the resin is cross-linked while maintaining the state of dispersion” means that the pigment dispersion still maintains the state of dispersion after the cross-linking and, therefore, the resulting dispersion contains the **cross-linked** resin.

In the present invention, the pigment dispersion is prepared by dispersing a pigment in water with the resin, cross-linking the resin in the resulting dispersion, and adjusting the pH of the dispersion to terminate the cross-linking reaction. The dispersion of the present invention is different from JP 09255867 in that the compositions disclosed in JP 09255867 do not contain a cross-linked resin and the cross-linking of a resin (dispersant) does not occur until after the compositions are applied to a substrate.

Claims 1-3 and 9 are rejected under 35 U.S.C. §102(b) as being anticipated by Tonogaki et al. (U.S. Patent No. 5,492,952).

Reconsideration and withdrawal of the rejection are respectfully requested in view of the proposed amendment to claim 1. As noted above, claim 1 has been amended to explicitly recite “while maintaining the state of dispersion.” Applicants submit, as previously argued, that in Tonogaki ‘952, the acrylic resin is not cross-linked while maintaining a state of dispersion. The composition of the reference is cross-linked only after being ejected from an ink-jet recording head onto paper, and drying to form a film.

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Jakubauskas (U.S. Patent No. 3,980,602).

Reconsideration and withdrawal of the rejection are respectfully requested in view of the

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proposed amendment to claim 1. As noted above, claim 1 has been amended to explicitly recite “while maintaining the state of dispersion.” Applicants submit, as previously argued, that in Jakubauskas ‘602, the acrylic polymer is not cross-linked while maintaining a state of dispersion. Applicants again note Example 1 of the reference, in which hexamethoxymethylmelamine is considered to react with the acrylic polymer when a panel onto which the paint is sprayed is prebaked.

Claim 2 is rejected under 35 U.S.C. §103(a) as being unpatentable over JP 09255867 in view of Carlson et al. (U.S. Patent No.6,136,890) and Suga et al. (U.S. Patent No. 5,604,276).

Reconsideration and withdrawal of the rejection are respectfully requested in view of the proposed amendment to claim 1. As noted above, claim 1 has been amended to explicitly recite “while maintaining the state of dispersion.” Applicants again argue that JP 09255867 does not teach or suggest this limitation, and further submit that Carlson et al. and Suga et al. do not suggest this limitation.

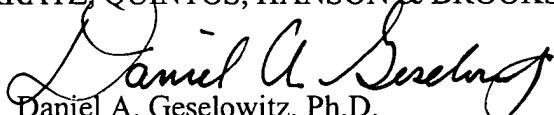
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If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned agent at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

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